

## CLAIMS

1. An information record medium comprising:  
a plurality of content informations;  
5 a plurality of play list sets each including a plurality of play list informations defining reproduction sequence of the plurality of content informations; and  
title information designating at least one play list set, which corresponds to the content informations to be reproduced, from  
10 among the plurality of play list sets to reproduce the plurality of content informations as a title, the title being a logical information unit of the plurality of content informations.
2. The information record medium according to claim 1, wherein  
15 the title information includes at least one title element, and  
the title element includes a first pointer information to designate at least one play list set corresponding to the content informations to be reproduced.
- 20 3. The information record medium according to claim 2, wherein  
the title element includes, in addition to the first pointer information, at least one of (i) a first pre-command information to indicate a command to be executed before a reproduction of the content information whose reproduction sequence is defined by one  
25 play list set designated by the first pointer information, (ii) a first post command information to indicate a command to be executed

after a reproduction of the content information whose reproduction sequence is defined by said one play list set and (iii) a first next information to designate a title element to be reproduced after the presently reproduced title element.

5

4. The information record medium according to claim 3, wherein one play list information defining the reproduction sequence of the content information to be reproduced is selected by the first pre-command information, from among the plurality of play list  
10 informations included in a same play list.

5. The information record medium according to claim 2, wherein attribute information indicating an inherent attribute is added to each of the plurality of play list informations included in a  
15 same play list set, and

the title element further includes a selectable flag indicating that one of the plurality of play list informations included in the same play list is selectable depending on the attribute information.

20 6. The information record medium according to claim 2, wherein the title element further includes selection condition information indicating a selection condition about each of the plurality of play list informations included in a same play list set.

25 7. The information record medium according to claim 4, wherein any one of the plurality of play list informations included in

the same play list set defines the reproduction sequence of content informations capable of composing a same title.

8. The information record medium according to claim 1, wherein  
5 each play list information includes at least one play list element,

the play list element includes a second pointer information to designate item information, which is logically accessible reproduction unit and composes the content information.

10

9. The information record medium according to claim 8, wherein  
the play list element includes, in addition to the second pointer information, at least one of (i) a second pre-command information to indicate a command to be executed before a  
15 reproduction of one item information designated by the second pointer information, (ii) a second post command information to indicate a command to be executed after the reproduction of said one item information, and (iii) a second next information to designate a play list element to be reproduced after the presently  
20 reproduced play list element.

10. The information record medium according to claim 1, wherein  
each of the plurality of play list sets includes, in addition to the plurality of play list informations, an item definition table to  
25 define item information, the item information being a logically accessible reproduction unit and composing the content

informations, and

each of the plurality of play list informations defines the reproduction sequence of the content informations by a unit of the item information.

5

11. The information record medium according to claim 8, wherein the item information comprises information, which defines a reproduction start address of the content information as in-point information and defines reproduction end address of the content information as out-point information.

10

12. The information record medium according to claim 1, wherein a whole stream including a plurality of partial streams made of the plurality of content informations is multiplexed by a packet unit which is a physically accessible unit and stores pieces of the plurality of content informations, and

15

relationship definition information defining a relationship between packets to be multiplexed and the plurality of partial streams is further recorded, as reproduction control information to control a reproduction of the plurality of content informations.

20

13. An information record apparatus comprising:  
a first record device for recording a plurality of content informations;

25

a second record device for recording a plurality of play list sets each including a plurality of play list informations defining

reproduction sequence of the plurality of content informations; and

a third record device for recording title information designating at least one play list set, which corresponds to the content informations to be reproduced, from among the plurality of play list sets to reproduce the plurality of content informations as a title, the title being a logical information unit of the plurality of content informations.

14. An information record method comprising:

a first record process of recording a plurality of content informations;

a second record process of recording a plurality of play list sets each including a plurality of play list informations defining reproduction sequence of the plurality of content informations; and

a third record process of recording title information designating at least one play list set, which corresponds to the content informations to be reproduced, from among the plurality of play list sets to reproduce the plurality of content informations as a title, the title being a logical information unit of the plurality of content informations.

15. An information reproduction apparatus for reproducing the information record medium according to claim 1, said apparatus comprising:

a reproduction device capable of reproducing the plurality of content informations, the plurality of play list sets and the title

information; and

a control device for (i) selecting at least one play list set designated by the title information reproduced by the reproduction device, from among the plurality of play list sets reproduced by the reproduction device and (ii) controlling the reproduction device to  
5 reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be reproduced, from among the plurality of play list informations  
10 included in the selected play list set.

16. An information reproduction apparatus for reproducing the information record medium according to claim 4, said apparatus comprising:

15 a reproduction device capable of reproducing the plurality of content informations, the plurality of play list sets and the title information; and

a control device for (i) selecting at least one play list set designated by the title information reproduced by the reproduction  
20 device, from among the plurality of play list sets reproduced by the reproduction device and (ii) controlling the reproduction device to reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be  
25 reproduced, from among the plurality of play list informations included in the selected play list set, wherein

the control device selects said one play list information from among the plurality of play list informations included in the selected play list set, on the basis of the first pre-command information.

5

17. An information reproduction apparatus for reproducing the information record medium according to claim 5, said apparatus comprising:

a reproduction device capable of reproducing the plurality of  
10 content informations, the plurality of play list sets and the title information; and

a control device for (i) selecting at least one play list set designated by the title information reproduced by the reproduction device, from among the plurality of play list sets reproduced by the  
15 reproduction device and (ii) controlling the reproduction device to reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be reproduced, from among the plurality of play list informations  
20 included in the selected play list set, wherein

the control device selects said one play list information from among the plurality of play list informations included in the selected play list set, on the basis of the attribute information, if it is indicated by the selectable flag that the play list information is  
25 selectable.

18. An information reproduction apparatus for reproducing the information record medium according to claim 6, said apparatus comprising:

5 a reproduction device capable of reproducing the plurality of content informations, the plurality of play list sets and the title information; and

a control device for (i) selecting at least one play list set designated by the title information reproduced by the reproduction device, from among the plurality of play list sets reproduced by the reproduction device and (ii) controlling the reproduction device to  
10 reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be reproduced, from among the plurality of play list informations  
15 included in the selected play list set, wherein

the control device selects said one play list information from among the plurality of play list informations included in the selected play list set, on the basis of the selection condition information.

20

19. An information reproduction method of reproducing the information record medium according to claim 1, said method implemented with an information reproduction apparatus comprising a reproduction device capable of reproducing the  
25 plurality of content informations, the plurality of play list sets and the title information, said method comprising:



a first control process of selecting at least one play list set designated by the title information reproduced by the reproduction device, from among the plurality of play list sets reproduced by the reproduction device and

5           a second control process of controlling the reproduction device to reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be reproduced, from among the plurality of play list  
10 informations included in the selected play list set.

20.   An information record reproduction apparatus comprising:

a first record device for recording a plurality of content informations;

15           a second record device for recording a plurality of play list sets each including a plurality of play list informations defining reproduction sequence of the plurality of content informations;

a third record device for recording title information designating at least one play list set, which corresponds to the  
20 content informations to be reproduced, from among the plurality of play list sets to reproduce the plurality of content informations as a title, the title being a logical information unit of the plurality of content informations;

a reproduction device capable of reproducing the plurality of  
25 content informations, the plurality of play list sets and the title information; and

a control device for (i) selecting at least one play list set designated by the title information reproduced by the reproduction device, from among the plurality of play list sets reproduced by the reproduction device and (ii) controlling the reproduction device to  
5 reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be reproduced, from among the plurality of play list informations included in the selected play list set.

10

21. An information record reproduction method implemented with an information record reproduction apparatus comprising a reproduction device capable of reproducing the plurality of content informations, the plurality of play list sets and the title information,  
15 said method comprising:

a first record process of recording a plurality of content informations;

a second record process of recording a plurality of play list sets each including a plurality of play list informations defining  
20 reproduction sequence of the plurality of content informations;

a third record process of recording title information designating at least one play list set, which corresponds to the content informations to be reproduced, from among the plurality of play list sets to reproduce the plurality of content informations as a  
25 title, the title being a logical information unit of the plurality of content informations;

a first control process of selecting at least one play list set designated by the title information reproduced by the reproduction device, from among the plurality of play list sets reproduced by the reproduction device and

5        a second control process of controlling the reproduction device to reproduce the plurality of content informations in accordance with the reproduction sequence defined by one play list information defining the reproduction sequence of the content information to be reproduced, from among the plurality of play list  
10 informations included in the selected play list set.

22.    A computer program for a record control to control a computer disposed at the information record apparatus according to claim 13, said program making the computer function as at least a  
15 part of the first record device, the second record device and the third record device.

23.    A computer program for a reproduction control to control a computer disposed at the information reproduction apparatus  
20 according to claim 15, said program making the computer function as at least a part of the reproduction device and the control device.

24.    A computer program for a record reproduction control to control a computer disposed at the information record reproduction  
25 apparatus according to claim 20, said program making the computer function as at least a part of the first record device, the second

record device, the third record device, the reproduction device and the control device.

25. A data structure including a control signal, said structure  
5 comprising:

a plurality of content informations;

a plurality of play list sets each including a plurality of play  
list informations defining reproduction sequence of the plurality of  
content informations; and

10 title information designating at least one play list set, which  
corresponds to the content informations to be reproduced, from  
among the plurality of play list sets to reproduce the plurality of  
content informations as a title, the title being a logical information  
unit of the plurality of content informations.